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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,006	07/24/2003	Mark B. Lyles	068351.0141	9914

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BAKER BOTTS L.L.P.
PATENT DEPARTMENT
98 SAN JACINTO BLVD., SUITE 1500
AUSTIN, TX 78701-4039

EXAMINER

MAYES, DIONNE WALLS

ART UNIT PAPER NUMBER

1731

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,006

Applicant(s)

LYLES, MARK B.

Examiner

Dionne Walls Mayes

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-14 and 58-107 is/are pending in the application.
- 4a) Of the above claim(s) 66-107 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10-14 and 58-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 10-14, 58-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strauch (US. Pat. No. 2,097,846) in view of Rubinfeld et al (US. Pat. No. 6,613,753).

Strauch discloses a filter disposed within a cigarette holder, see Figs. 6 and 7, said filter having a filtering surface (34). While Strauch may not specifically state that the filter includes a carcinogen-reducing amount of nucleic acid which is apurinic acid, Strauch does state that its disclosed filter may be medicated with volatile drugs (also see page 2, col. 1, lines 65-74). Further, Rubinfeld et al discloses a drug that acts as an anti-neoplastic or anti-cancer agent, such as apurinic acid, which can be administered via inhalation (see entire document). It follows that one having ordinary skill in the art would have opted to add the apurinic acid-based drug, disclosed in Rubinfeld et al, into the filter of Strauch in order to receive the therapeutic benefits of the drug in combating some of the well-known cancerous effects that tobacco smoke has on the body over time. While there may be no teaching in the combined references of a "carcinogen-reducing" amount of apurinic acid added to such filter, it follows, from the teaching, in Rubinfeld, of the addition of a "therapeutically effective" amount of the substance, that

one would have obviously added the drug in an amount so as to cause a reduction of carcinogens in tobacco smoke.

Regarding claims 3 and 12, It would have been obvious to one having ordinary skill in the art at the time of the invention to have distributed the nucleic acid substantially uniformly on the filtering surface, of any of the filters disclosed in the above references, in order to better appreciate the benefits of the substance in filtering harmful material from fluids.

Regarding claims 5 and 14, one having ordinary skill in the art would have optimized the amount of apurinic acid, and arrived at the claimed percentage in an effort to achieve the most effective amount of drug delivery to the user.

Regarding claims 58-59, it follows that the claimed bonds, especially covalent bonding, would occur due to the cross linking since these types of bonds commonly occur in chemical and/or physical modification of chemical substances.

Response to Arguments

3. Applicant's arguments filed May 10, 2006 have been fully considered but they are not persuasive.

- Applicant argues that the Strauch reference relates to "Nasal Inhalers" for application of medications; however, as indicated in Figs. 6 and 7, Strauch discloses embodiments which are directed to a device for connection to a cigarette whose smoke is to be filtered while being inhaled (See Page 2, col. 1, lines 41-45). Additionally, Strauch discloses the use of "volatile drugs" in the filter material of said device. Since the whole purpose of a cigarette filter is to "filter" harmful constituents of tobacco smoke

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it follows that Strauch envisions the use of a "drug" which enhances this function. The Rubinfeld et al reference was introduced for its disclosure of a drug (apurinic acid) that acts as an anti-cancer agent which is capable of being inhaled, i.e. is volatile. It follows that one having ordinary skill in the art would have opted to use this drug in the filter of Strauch in order to receive the anti-cancer benefits that the drug provides when inhaled. Just because Rubinfeld et al fails to mention the use of such agent to inhibit the delivery of cancer-causing agents, it does not mean that this function is not accomplished. The Examiner believes that there is sufficient motivation to combine the use of apurinic acid as an inhalant for anti-cancer purposes in the filter of Strauch, even though those reasons may not be the same as Applicants. The fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Using Apurinic acid in the filter of Strauch will accomplish the same function that Applicant intends for the claimed filter to achieve.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

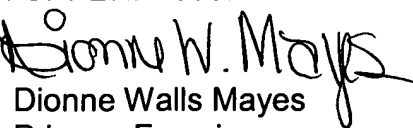
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Walls Mayes whose telephone number is (571) 272-1195. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Dionne Walls Mayes
Primary Examiner
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